

CLAIMS

What is claimed is:

1. A caster wheel assembly for a wheeled device comprising:
5 a housing suitable for connection to a wheeled device;
a caster mounting assembly configured to mount a caster wheel for rotation;
a caster bolt connected to the caster mounting assembly and inserted into the
housing for rotation within the housing; and
a damping insert applying a biasing force between the caster bolt and the
10 housing to dampen the rotation of the caster bolt with respect to the housing.
2. The caster wheel assembly of claim 1 including upper and lower
bearings and a cylindrical spacer positioned between the bearings, and wherein the
biasing force between the caster bolt and the housing consists of applying the biasing
15 force between the spacer and the housing.
3. The caster wheel assembly of claim 2 in which the damping insert is one
or more discs positioned between the spacer and the housing.
- 20 4. The caster wheel assembly of claim 1 in which the damping insert is a
circular disc.
5. The caster wheel assembly of claim 1 in which the damping insert is
comprised of a polymeric material.
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6. The caster wheel assembly of claim 1 in which the damping insert has a
first stiffness along a first axis and a second, different stiffness along a second axis
that is perpendicular to the first axis, thereby enabling the damping insert to be

inserted into the caster wheel assembly in either of two orientations, with the first orientation providing a first damping result and the second orientation providing a different damping result.

5 7. The caster wheel assembly of claim 1 in which the damping insert is rectangular.

 8. The caster wheel assembly of claim 1 in which the damping insert is readily removable and replaceable.

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 9. The caster wheel assembly of claim 1 in which the caster mounting assembly is a caster fork.

 10. A wheelchair having a frame, at least two drive wheels, and at least two
15 caster wheels, each caster wheel being supported by a caster wheel assembly comprising:

 a housing suitable for connection to the wheelchair;

 a caster mounting assembly configured to mount a caster wheel for rotation;

 a caster bolt connected to the caster mounting assembly and inserted into the
20 housing for rotation within the housing; and

 a damping insert applying a biasing force between the caster bolt and the housing to dampen the rotation of the caster bolt with respect to the housing.

 11. The wheelchair of claim 10 wherein the caster wheel assembly includes
25 upper and lower bearings and a cylindrical spacer positioned between the bearings, and wherein the biasing force between the caster bolt and the housing consists of applying the biasing force between the spacer and the housing.

12. The wheelchair of claim 10 in which the damping insert is one or more discs positioned between the spacer and the housing.

5 13. The wheelchair of claim 10 in which the damping insert is a circular disc.

14. The wheelchair of claim 10 in which the damping insert is comprised of a polymeric material.

10 15. The wheelchair of claim 10 in which the damping insert has a first stiffness along a first axis and a second, different stiffness along a second axis that is perpendicular to the first axis, thereby enabling the damping insert to be inserted into the caster wheel assembly in either of two orientations, with the first orientation providing a first damping result and the second orientation providing a different
15 damping result.

16. The wheelchair of claim 10 in which the damping insert is rectangular.

20 17. The wheelchair of claim 10 in which the damping insert is readily removable and replaceable.

18. The wheelchair of claim 10 in which the caster mounting assembly is a caster fork.